IN THE CLAIMS

1. (Currently amended) A method of reproducing data from a continuous data stream, the data stream incorporating an error protection code applied on the basis of a predetermined size of data block, the method comprising:
   (a) providing a plurality of syndrome buffers for use in an error correction process, each capable of storing an error correction syndrome from which corrections of data within such a data block may be derived; and
processing said data stream by steps including:
   (b) using a first one of the syndrome buffers to accumulate a first syndrome applicable for correction of a first data block;
   (c) storing the data for said first data block in a data buffer, without applying corrections derived from said first syndrome;
   (d) using a second one of the syndrome buffers to accumulate a second syndrome from which corrections of data within a second first data block may be derived;
   (e) storing the data for said second data block in a data buffer, without applying corrections derived from said second syndrome;
   (e)(f) concurrently with step (d), using the accumulated first syndrome in the first syndrome buffer to calculate the corrections applicable to said first data block; and
   (f)(g) after step (e), releasing the first syndrome buffer for use in accumulating a syndrome for a subsequent data block; and
   (g)(h) using the accumulated second syndrome in the second syndrome buffer to calculate the corrections applicable to said second data block,
the process continuing in like manner until all desired data blocks have been processed.

2. (Original) A method as claimed in claim 1 wherein in each of the steps (e) and (g) the results of the correction calculations are stored in the first and second syndrome buffers, over-writing the accumulated first and second syndromes respectively.

3. (Original) A method as claimed in claim 1 wherein the method further comprises (h) applying corrections to each respective block of data in accordance with the results of the correction calculations performed in steps (e) and (g).

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4. (Original) A method as claimed in claim 1 wherein the corrections are applied to the data by read-modify-write operations at selected locations in the data buffer.

5. (Original) A method as claimed in claim 1 wherein the first and second syndrome buffers are designated block-by-block from among a set of more than two physical syndrome buffers.

6. (Original) A method as claimed in claim 1 wherein the received data stream is one of a set of N sub-streams being read in parallel, starting from N respective locations within a single recorded data stream, step (a) providing at least 2N physical syndrome buffers.

7. (Original) A method as claimed in claim 6 wherein the single recorded data stream comprises data recorded in a spiral on a disc-like record carrier.

8. (Original) A method as claimed in claim 6 wherein in a multi-track implementation, said data stream may commence part way through a data block, step (b) comprising accumulating a partial syndrome only, the method further comprising (i) storing said partial syndrome and subsequently completing the syndrome when the beginning of the same data block is received in another of said streams.

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9. (Original) A method as claimed in claim 8 wherein step (i) includes transferring the partial syndrome from the first syndrome buffer to said buffer memory.

10. (Original) A method as claimed in claim 9 wherein the partial syndrome is transferred back into one of said syndrome buffers for completion.

11. (Original) A method as claimed in claim 1 wherein the first and second syndromes form part of an outer error correction process, each data block comprising a number of sub-blocks subject within themselves to an inner error correction process, the data stored in step (c) block being stored in said buffer after undergoing said inner error correction process.

12. (Original) A method as claimed in claim 11 wherein said sub-blocks may be regarded as rows of a two-dimensional matrix, the inner error correction being applied to individual rows the matrix, relatively localized within the received data stream, while the outer correction process is applied to columns of the matrix, extending relatively widely within the data stream.

13. (Cancel)

14. (Original) A method of data processing, the data comprising DVD data recorded on a optical disc, wherein double buffering is used for outer error correction syndromes, the syndrome for one ECC frame being accumulated in one syndrome

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buffer, while error correction calculations for preceding data block are performed using a syndrome accumulated previously in another syndrome buffer, the syndrome buffers being used in turn as further blocks of data are received.

15. (Original) A method as claimed in claim 14 wherein the data for each block are transferred to a buffer memory not integrated with the syndrome buffer, before the corresponding corrections are calculated or applied.

16. (Cancel)

17. (Cancel)

18. (Cancel)

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